

2006 ICEID Abstract

**Title: Comparison of travel-related, outbreak-associated, and sporadic cases of Salmonellosis among residents of FoodNet sites.**

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**Background:** One objective of the Foodborne Diseases Active Surveillance Network (FoodNet) is to attribute the burden of foodborne illness to specific foods and settings. A number of modeling projects are currently underway to help estimate illness caused by various food commodities. Data needed to model salmonellosis include observed human cases by serotype and estimates of sporadic and domestically-acquired cases. The objective of this analysis is to determine the proportion of travel and outbreak-related cases and identify any variation in clinical outcomes.

**Methods:** FoodNet conducts active laboratory-based surveillance for *Salmonella* in 10 sites and began ascertaining outbreak-association and foreign travel in 2004. Sporadic domestically acquired cases were defined as cases with no known foreign travel history or outbreak association. Cases with unknown or missing data on travel or outbreak association were excluded from analysis.

**Results:** A total of 8689 *Salmonella* cases were reported to FoodNet between January 2004 and June 2005. Among cases with known travel status and outbreak association (n=5147), 12% had traveled internationally and 9% were part of an outbreak. Sporadic domestically acquired (SDA) cases had significantly higher rates of hospitalization compared to travel related cases (RR=1.6, CI=1.3-1.9) and outbreak cases (RR=1.6, CI=1.3-2.0). Compared to outbreak cases, SDA cases were more likely to have *Salmonella* isolated from blood or CSF (RR=2.1, CI=1.2-3.5) and less likely compared to travel-related cases (RR=0.5, CI=0.4-0.7). No travel-related cases died and there was no significant difference in mortality rate between SDA and outbreak cases. *S. typhimurium* and *S. enteritidis* were the most common serotypes reported among travel, outbreak, and SDA cases; however, the serotype distribution (top 5) differed (Table 1).

**Conclusion:** Cases of outbreak-associated, travel-related and sporadic-domestically acquired salmonellosis differ on rates of hospitalization, specimen source and serotype distribution. Collecting data on travel history and outbreak association is an important component of foodborne disease surveillance.

Table 1. Top 5 Serotypes by Group

Outbreak Associated Cases,% (n=441)		International Travel Related Cases, % (n=605)		Sporadic-Domestically Acquired Cases, % (n=4101)	
1. Enteritidis	22.2	1. Enteritidis	49.7	1. Typhimurium	32.1
2. Typhimurium	19.1	2. Typhimurium	14.5	2. Enteritidis	24.1
3. Javiana	12.8	3. Typhi	9.9	3. Newport	11.6
4. Newport	11.7	4. Agona	5.3	4. Heidelberg	9.5
5. Heidelberg	9.1	5. Saintpaul	4.8	5. Javiana	6.9